

## Challenges Require Innovative Problem-Solving

### District 4 Blazes Innovative Paths

District 4 knows that there's special meaning to the transportation phrase, "Getting there is half the fun." By taking new routes to solve problems, the Kansas City District's engineers, designers and maintenance workers enjoy going in a different direction.

Some recent examples are the TowPLow™ and Salty Dog for snow removal, roundabouts, diverging diamond interchange, hot in-place asphalt recycling, offset left turns and special emergency response zones in the Triangle interchange.

Some of these innovations are new to the world – like the TowPLow, which was invented by MoDOT employee Bob Lannert in Jefferson City, and fabricated at the Oak Grove facility in District 4.

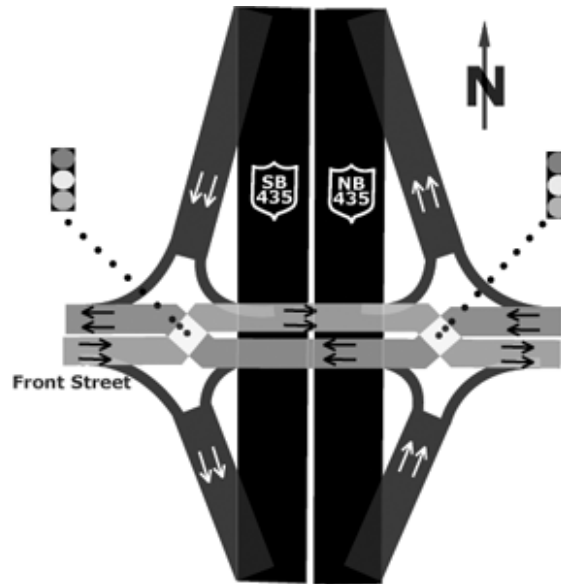
The towed snowplow equipment has generated international attention and is being manufactured commercially. It was first tested in District 4. The Salty Dog, a

semi-tanker that sprays brine on Missouri interstates, also was introduced first in the Kansas City district.

"These innovations save money, equipment and time," said Assistant District Engineer Chris Redline. "We have far more challenges than money in the budget or

the personnel necessary to meet them, so being creative helps narrow the gap."

The diverging diamond interchange proposed for I-435 and Front Street appears to be a far more cost-effective and less disruptive solution to chronic congestion at that interchange.



**Diverging Diamond Interchange**

The revolutionary design (only one has been built in the world so far, in France) has generated inquiries from as far away as Australia. The \$6 million project would cost about half as much as traditional designs and could be started and completed in 2007.

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## Crest Ridge High School Hosts Traffic Safety Day

### Safety, Civic Lessons Combine

In mid-December, MoDOT District 4 engineers and designers capped a more than year-long project to improve a busy rural intersection by participating in a high school forum to highlight traffic safety for new drivers.

Transportation  
Project Manager  
Randy Johnson, Area  
Engineer Darryl  
Lamson, Intermediate  
Construction  
Inspector Aydi  
Girgin, and Senior  
Operations Specialist

Bill Whitfield, Jr. spoke to students at Crest Ridge High School in Centerview, Mo., during Traffic Safety Day Dec. 16. Also participating were Johnson County Sheriff Chuck Heiss and two mothers of children who were killed in traffic collisions.

MoDOT officials brought along special goggles that, when worn by the students, gave them a feel for what it is like to be impaired by drugs or alcohol. Several of the students also performed a skit portraying the tragic effect that a serious traffic crash can have on lives of all involved.

Johnson explained the process and eventual design of improvements to the Route 50 and Route 58 intersection, which is within a few hundred yards of the high school. The intersection has been reconfigured to add offset left turn lanes, which improve safety at the busy intersection. The project was conceived more than a year earlier. MoDOT traffic engineers met three times with the

community to consider solutions and discuss challenges.

The offset left turn lanes – first in the state – were a cost-effective solution. More than \$700,000 in federal funds earmarked for

safety improvement projects is paying for the reconfigured intersection.

"The improved visibility for the drivers in the offset left turn lane is appreciated by the students and faculty who use

it," said Johnson. "Because this is a new intersection design for MoDOT, we have been working closely with the community and listening to any comments they have on further improvements to the intersection."

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*"The improved visibility for the drivers in the offset left turn lane is appreciated by the students and faculty who use it."*

*~Randy Johnson  
Transportation Project Manager*

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MoDOT employees Aydi Girgin, Bill Whitfield and Randy Johnson (l-r) explain steps that young drivers can take to be safer.

Joni Shelton

## Cowboy Attitudes Drive Up Serious Injury, Fatality Collision Rates

### Destination: Safe Targets Unbuckled Drivers

Young cowboys may be considered cool, but a cowboy attitude on Missouri highways is driving up the serious injury and fatality collision rates.

The statewide Arrive Alive and local Destination: Safe campaigns have launched a media drive to reduce the trend, targeting young, male, pickup-truck-drivers who often fail to buckle their seat belts. If you've heard the message on a country, rock or sports formatted radio station lately, or have seen a billboard, you know the word is getting out.

Destination: Safe in the Kansas City region is among eight area coalitions across the state that are working to reduce Missouri traffic fatalities to 1,000 or fewer by 2008.

Statewide, we haven't turned the corner. Preliminary data indicate Missouri had 1,215 fatalities in 2005 compared to 1,130 fatalities the year earlier. Missouri has not had fewer than 1,000 traffic fatalities since 1993, when 949 people were killed.

In the Kansas City region, the trend appears better. Preliminary numbers indicate fatalities are down nearly 10 percent in the Mid-America Regional Council area, and down nearly 9 percent in the Kansas City region over the past five years, with declines in each of the past four years.

The statewide campaign, launched last fall, includes billboards throughout Missouri showing a pickup that has rolled on its top, with the phrase, "Pickups Rock. They Also Roll. Buckle Up!"

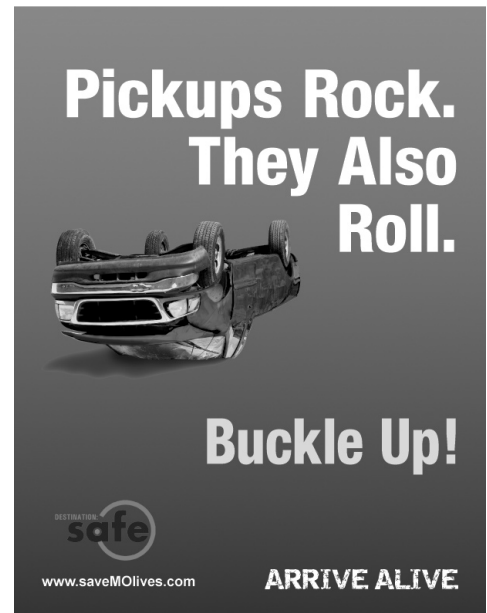
The billboard can be found on the south-east side of the Downtown Loop in District 4, but anyone who's traveled a Missouri interstate highway within the past three

months will have seen the billboard at many other locations, too.

The statewide campaign also aired 30-second radio spots on a wide variety of District 4 stations, including WDAF-FM (country), KPRS AM and FM (urban), KOKO-AM KDKD-AM and FM and KMMO-AM and FM in the Warrensburg, Clinton and Marshall markets. The spots aired through Dec. 31, 2005.

Destination: Safe, the Kansas City regional campaign, is focusing sharply on young males who listen to country, rock or sports stations, extending the ad campaign into early April on: KXXK-FM (Sedalia/Warrensburg country format); KCFX-FM (Harrisonville/Kansas City classic rock and sports); KKF-KBEQ 104 (Kansas City country format) and WHB-AM (sports talk and Royals radio flag station).

The intense media buy – targeted to end just as Work Zone Safety campaigns are to begin – also includes indoor advertising, the 8-by-12-inch billboards seen in the bathrooms of restaurants and bars.



## Innovative Paths

*continued from page 1*



Jennifer Benefield

**MoDOT contractor Cutler Repaving uses hot in-place asphalt recycling at Interstate 29 and Route 92 in September 2005.**



Pat Moseley

**The TowPLOW™ makes its debut along Interstate 70 in Kansas City during a Jan. 5, 2005 snowfight. Designed by Bob Lannert, Central Office technical support engineer, and crafted by D4's Oak Grove maintenance facility employees, the TowPLOW performs the equivalent work of two trucks in a gang plow operation.**

Roundabouts, offset left-turn intersections and hot in-place asphalt recycling aren't new inventions, but they are solutions new to Missouri, chosen by District 4 to meet challenges that defied traditional remedies.

MoDOT's first roundabout was built on Route 45 in Parkville, and a system of four consecutive roundabouts is now complete on Route 58 in Belton. An offset left-turn intersection at Route 58 and Route 50 in Johnson County – a first for the district, but not a first in the state – demonstrates that MoDOT and its partnering communities are willing to try something different to improve safety.

A hot in-place asphalt recycling system, introduced to Missouri last summer on Interstate 29 from Platte City to the Buchanan County line, has proven to be both cost-effective and faster than traditional resurfacing methods.

The special emergency response zones in the Triangle interchange are a federally approved pilot project that also is being tested at two other interchanges in this country. The zone signs have proven helpful to emergency crews responding to breakdowns, collisions and other incidents in the interchange. Stranded motorists need only identify the nearest zone sign, which helps emergency dispatchers send help by the most direct and accessible route.

"Each of these innovations isn't a solution applicable to every challenge, but they are examples of MoDOT's willingness to be imaginative and open to new ideas," Redline said. "Keeping an open mind is one way we can provide the best value for every dollar spent."

## Route H Named for Harriman

A ceremony to rename a portion of Highway H in Clay County for Dr. Richard Harriman, co-founder of the Harriman Arts Program of William Jewell College, was held

Dec. 9, 2005 on the campus in Peters Theater.

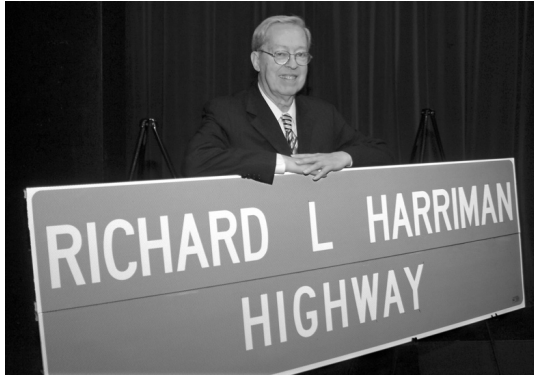
State Rep. Tim Flook introduced legislation into House Bill 487 that named Highway H from Richfield Road north to Route B as the "Richard L. Harriman Highway."

The bill was signed into law by Lieutenant

Governor Peter Kinder in May 2005.

William Jewell College President Dr. David Sallee hosted the ceremony, which included guest speakers Mayor Robert Steinkamp of Liberty; Flook; the honorable Larry Harmon, Clay County Circuit Court judge; Roswitha Schaffer, chair of the Harriman Arts Council; and Dr. Dean Dunham, William Jewell College professor and Harriman Arts Program co-founder.

In its 41st season, the Harriman Arts Program of William Jewell College continues to carve out an enviable legacy as a performing arts presenter of international importance. More than 700 performances have come to Kansas City by way of the Harriman Arts Program, including 17 American recital debuts. Perhaps most notable was the 1973 professional recital debut of tenor Luciano Pavarotti.



Don Ipock

**Dr. Richard L. Harriman poses by a highway sign which bears his name. A portion of Route H in Clay County is named for Harriman who co-founded the Harriman Arts Program of William Jewell College 41 years ago.**

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## Another Roadway Achieves Scenic Byway Status

A section of Route 24 in eastern Lafayette County has been designated a Scenic Byway by the Missouri Highways and Transportation Commission.

The route's new status was confirmed at the November 2005 MHTC meeting. The Route 24 Scenic Byway extends from the Saline/Lafayette County line westward to the Route 224 intersection at Lexington. The 15-mile stretch of Route 224 in Lafayette County, known as the Old Trails Road, is already designated as a Scenic Byway.

District 4 is now home to four of the state's six touring routes with the designation. The

Cliff Drive and Spirit of Kansas City roadways in historic sections of Kansas City are also Scenic Byways.

Scenic byways are special roads that offer travelers access to Missouri's beautiful scenery, cultural riches and natural areas. Any agency, group or individual can nominate a route for scenic byway designation, but there must be local governmental support and commitment for designating the route a scenic byway, since the purpose of the program is to preserve and improve the scenic value of the route.



## Interstate 70 Work to Continue This Year

# Jackson County Interstate 70 Project Complete

Two construction seasons of narrow, reduced lanes and congested traffic ended in October 2005 when all east- and westbound lanes of Interstate 70 from Interstate 470/Route 291 to Route 7 were reopened to traffic.

MoDOT Director Pete Rahn and District Engineer Beth Wright thanked elected officials, area businesses, APAC-Kansas, Inc., and its sub-contractors who gathered at Blue Ridge Bank and Trust Oct. 21, 2005 to mark the completion of the 5-mile, \$40-million project.

"We are extremely pleased to deliver this project on time," said District Engineer Beth Wright. "We appreciate the cooperation of the cities of Independence and Blue Springs and the patience of the traveling public while the project was constructed."

The project began in Fall 2003 with earth and retaining wall work. It included total pavement replacement of east- and westbound lanes; construction of auxiliary

lanes between Interstate 470 and Little Blue Parkway; construction of 12-foot shoulders designed to accommodate future expansion; widening, rehabilitation and redecking of the east- and westbound bridges over the Little Blue River; widening and rehabilitation of the east- and westbound bridges over Kansas City Southern Railways; and the incorporation

of Kansas City Scout's traffic management system.

Scott Gammon, Vice-President of APAC-Kansas, Inc., said his company was pleased to be a part of the project and complete the work with 59 days still left in the contract. He described the large amount of concrete needed for the newly-constructed lanes. "For all you football fans, that's like paving Arrowhead Stadium 26 times."

Blue Springs Mayor Steve Steiner, Independence City Councilman Jim Schultz, State Rep. Gary Dusenburg and Blue Ridge Bank and Trust president Bill Esry thanked MoDOT for completing such a large project with minimal disruption to the area.

Rahn said in his travels across the state, MoDOT's customers are noticing a marked improvement in the state's transportation system, thanks to the Smoother, Safer, Sooner initiatives. Rahn said MoDOT does hope to one day improve the remaining 200 miles of Interstate 70 between Kansas City and St. Louis, but currently there is no funding for the overall project. "It could cost \$3.5 billion," Rahn said. "Right now we have zero."

Meanwhile, a variety of 2006 Interstate 70 work will take place in Lafayette County:

- Resurface east- and westbound lanes and shoulders from Johnson Drive in Odessa to Route 13. Variable day- and nighttime work.
- Resurface east- and westbound lanes from Route 7 in Blue Springs to Route D near Bates City. Nighttime work.
- Resurface east- and westbound lanes and seal shoulders from Route Z to Johnson Drive.



Jennifer Benefield

**Transportation Project Manager Susan McCubbins (left) and Resident Engineer Shelia Tiszka celebrate the completion of the \$40 million Interstate 70 reconstruction project in October 2005.**

## Interstate 435 Bridge Rehabilitation Project Under Way

Rehabilitation of the Interstate 435 bridge over the Missouri River began March 1 with the closure of the structure's middle and right northbound lanes to set up traffic control.

The right northbound lane reduction is expected to continue until at least May 21, and marks the beginning of a \$21 million project that will complete structural repairs and place a new driving surface on the bridge. Other lane and ramp closures in either direction will continue throughout the summer and fall, with project completion expected by the fall of 2007. The bridge will be open to three-lane traffic in each direction for the 2006-2007 winter months.

"This is the metropolitan area's busiest river crossing, so commuters and other travelers should plan accordingly," said Beth Wright, MoDOT District Engineer. "As we have in the past few years, we'll try to

minimize impacts to traffic by completing as much of this work as we can on weekends and at night. And while this project won't have the same impact as last year's Paseo Bridge closure, local drivers may want to consider another route for their commute."

The 34-year-old bridge accommodates approximately 100,000 vehicles (50,000 in each direction) on an average day. Wright said the project, which was accelerated with Amendment 3 funding, is the latest MoDOT effort to rehabilitate and refurbish the region's river crossings.

"Over the last 10 years, we've been working to repair and repaint our metropolitan-area river bridges on a regular basis," Wright said.



**Containment tarps drape the Interstate 435 Missouri River bridge as crews blast off old paint February 28.** Photo: Bob Ruffini

## Fairfax Bridge Repairs Take Just Three Days

The Fairfax Bridge, which carries the southbound lanes of Route 69 from Missouri into Kansas, reopened just three days after closing for urgent repairs. The closure was initially expected to last as long as three weeks.

MoDOT crews closed the 72-year-old bridge for repairs February 6. Traffic headed for the Fairfax District in Kansas City, Kan., was detoured to the nearby Interstate 635 bridge and then east on Kansas Route 5. The structure carries about 7,500 vehicles per day.

Repairs went much faster than anticipated, according to Chris Redline, assistant district engineer. Crews were working on the lower chord of a large truss that was a significant distance from the ground, and their

experience on similar jobs led them to expect a variety of challenges.

"Removing the rivets was not as difficult as our crews expected, so the work took a fraction of the time we estimated," Redline said.

On January 11, MoDOT restricted bridge traffic to vehicles weighing 10 tons or less after routine inspections revealed that splice plates on lower sections of a truss had developed cracks. Crews installed new splice plates while the bridge was closed, and the 10-ton weight restriction has been removed.

"We were delighted to reopen the bridge so quickly," Redline said. "That's the kind of surprise we like to enjoy with our customers."

## State Employees Contribute to Hurricane Relief Efforts

Kansas City-area state employees from the departments of Transportation, Natural Resources, Conservation and the Missouri State Highway Patrol formed MoHELPS and raised \$4,766 to aid those impacted by Hurricane Katrina.

A Sept. 21 chili cook-off luncheon and a Halloween Soups, Brews & Stews luncheon and silent auction held at the district office generated cash donations for the fund.

State employees also donated time on Saturdays through October to collect water, food, clothing and household goods at MoDOT maintenance facilities throughout the district.

Dave Walker of Walker Tire-Truck & Tow Service of Odessa, Mo. and his employees made several trips to the Gulf Coast region to voluntarily distribute the donations to those in need.

Prime Outlets at Odessa provided free space to Walker so the items could be securely

stored until volunteers could sort and load the items into tractor trailers.

State employees presented Walker with a \$600 check for fuel and a certificate of appreciation Nov. 8 for his support of the MoHELPS campaign.



Jennifer Benefield

**Assistant to the District Engineer Sharon Taegel, Roark Holzschuh with the Department of Natural Resources and Missouri State Patrolman Lieutenant Dave Smith present a \$4,766 check to American Red Cross Major Gifts Officer Mike Tarry (left) on behalf of state employees on Nov. 22, 2005.**



### Missouri Department of Transportation

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